

Super Seal

SFUND RECORDS CTR
2390627

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

MEMORANDUM

TO: Ed Fox, Director
FROM: Bill Wiley, Deputy Director
DATE: February 28, 1992
SUBJECT: Brief Summary of Tri City Groundwater Data (Based on Schmidt 1990)

Flow direction to southeast (See map).

Five monitor wells, 14 production wells sampled.

VOC plume extends about three miles to southeast (See map).

Six production wells affected, three SRP, three sand and gravel.

Major constituents:

		<u>AWQS</u>
TCE	<0.5 to 38 ppb	5 ppb
PCE	<0.5 to 8.4 ppb	5 ppb
Vinyl Chloride	<0.5 to 8.8 ppb	2 ppb
1,1, DCA	<0.5 to 13 ppb	N/A

Water levels generally have declined since 1985.

Flows in Salt River may have reduced VOC levels since 1951 (dilution).

Old Tri Cities landfill and North Center Street Landfill may also contribute.

In Spring 1990, only one well (Calmat) exceeded AWQS (MCLS).

Schmidt indicates that "active" Tri-Cities landfill, poses no threat to the quality of groundwater in the area". Chuck Graf still has questions on this.

Original PASI report submitted in 1987, before monitor wells installed and new scoring system was in place.

Recommend:

- 1) resample, split samples.
- 2) re score based on new data and new scoring system.

ADEQ Issues:

Surface Water Quality
Ground Water Quality
Landfill closure

EPA Options:

Stormwater
Superfund
Drinking water

Desired Outcome:

Cooperative agreement between SRP Indian tribe, EPA and ADEQ.

WDW:ml

Attachment

TABLE 6 - VOLATILE HALOCARBON CONTENTS IN WATER FROM MONITOR WELLS

Well No.	Date	Volatile Halocarbon Content (ppb)									
		TCE	PCE	1,1-DCE	Trans-1,2-DCE	Cis-1,2-DCE	Vinyl Chloride	1,1-DCA	1,1,1-TCA	1,2-DCA	Freon -113
East	01/07/81	38	3.1	-	-	-	-	-	-	-	-
	10/11/85	1.2	5.1	4.2	2.5	-	<1	12	1.2	0.7	2.1
	06/09/87	1.0	5.6	5.4	3.7	-	15*	12	<1	<1	-
	12/15/87	1.3	3.5	<0.5	<0.5	-	<0.5	6.1	<0.5	<0.5	-
	03/01/90	2.9	3.8	0.7	<0.5	3.1	<0.5	5	<0.5	<0.5	-
West	01/07/81	1.7	2.8	-	-	-	-	-	-	-	-
	10/11/85	12	2.7	<0.5	7.9	-	<1	13	<0.5	<0.5	3.6
	06/09/87	9.3	1.0	<1	7.7	-	19*	13	<1	2.7	-
	12/15/87	8.3	1.7	<0.5	<0.5	-	<0.5	8.5	<0.5	<0.5	-
	04/17/90	3.4	0.8	<0.5	<0.5	2.2	<0.5	4.8	<0.5	<0.5	<0.5
MW-1	02/16/90	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-
MW-2	02/22/90	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-
MW-3	02/22/90	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	-
MCL		5	5	7	100	70	2	N.A.	200	5	N.A.

Samples collected in 1981 were analyzed by Stoner Laboratories, Santa Clara, California. Samples collected in 1985 were analyzed by California Analytical Laboratories, W. Sacramento, California. Samples collected in June 1987 were analyzed by Arizona Testing Laboratories, Phoenix, Arizona. Samples collected in December 1987 and 1990 were analyzed by APPL, Inc. of Fresno, California.

*Apparently a lab error.

TABLE 7 - VOLATILE HALOCARBON CONTENTS IN WATER FROM GRAVEL PROCESSING WELLS

Location	Owner	Date	Volatile Halocarbon Content (ppb)					
			TCE	PCE	1,1-DCE	Trans-1,2-DCE	Cis-1,2-DCE	Vinyl Chloride
(A-1-5) 3acc	CalMat	05/07/85	12	5.7	<0.5	1.7	-	-
		10/17/85	16	7.7	0.8	<0.5	-	7.3
		10/21/85	17	8.4	1.7	<0.5	-	8.8
		03/15/90	12	5.7	<0.5	<0.5	3.4	<0.5
4dad	Mesa Sand & Gravel	05/07/85	0.6	0.8	<0.5	<0.5	-	-
		10/21/85	0.5	0.6	<0.5	<0.5	-	<1
		02/22/90	0.6	0.7	<0.5	<0.5	-	<0.5
(A-2-5) 34ccb	Union Rock	05/21/85	<0.5	<0.5	<0.5	<0.5	-	-
		10/18/85	0.7	1.0	<0.5	<0.5	-	3.4
		02/27/90	1.2	1.5	<0.5	<0.5	-	<0.5
Maximum Contaminant Level			5	5	7	100	70	2

Samples collected in 1985 were analyzed by California Analytical Laboratories, W. Sacramento, California. Samples collected in 1990 were analyzed by APPL, Inc., Fresno, California.

TABLE 8 - VOLATILE HALOCARBON CONTENTS IN WATER FROM
SALT RIVER PROJECT AND CITY OF MESA WELLS (Continued)

Well No.	Date	Volatile Halocarbon Content (ppb)						Freon- 113
		TCE	PCE	1,1-DCE	Trans- 1,2-DCE	Cis- 1,2-DCE	1,1-DCA	
29E-6N	06/20/85	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5
	06/19/89	<0.5	<0.5	<0.5	<0.5	-	<0.5	-
29.5E-5.7N	06/27/85	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5
	12/02/89	<0.5	<0.5	<0.5	<0.5	-	<0.5	-
Mesa City Zone No. 24								
MCL		5	5	7	100	70	N.A.	N.A.

Samples collected in 1984 and 1985 were analyzed by California Analytical Laboratories, W. Sacramento, California. Samples collected in 1987 and 1989 were analyzed by APPL, Inc., Fresno, California.

TABLE 8 - VOLATILE HALOCARBON CONTENTS IN WATER FROM
SALT RIVER PROJECT AND CITY OF MESA WELLS

Well No.	Date	Volatile Halocarbon Content (ppb)						Freon-113
		TCE	PCE	1,1-DCE	Trans-1,2-DCE	Cis-1,2-DCE	1,1-DCA	
26.5E-4.3N	06/27/85	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5
	06/16/89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
26.9E-5N	06/25/85	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5
	06/21/89	<0.5	<0.5	<0.5	<0.5	-	<0.5	-
27.1E-4N	06/26/85	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5
27.9E-5N	06/26/85	4.2	4.6	0.6	2.0	-	<0.5	<0.5
	06/23/89	2.1	2.1	<0.5	<0.5	2.0	<0.5	-
28E-5.5N	06/28/85	6.3	7.1	<0.5	0.8	-	<0.5	<0.5
28E-6N	06/27/85	10	0.8	<0.5	2.9	-	4.0	1.6
	06/16/89	2.6	0.6	0.5	<0.5	1.7	2.9	-
28.3E-4.2N	06/24/85	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5
	07/10/89	<0.5	<0.5	<0.5	<0.5	-	<0.5	-
28.6E-5.5N	06/21/85	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5
	06/20/89	2.9	1.5	<0.5	<0.5	-	<0.5	-

Continued: